



Safe Motherhood: Promoting Health for Women Before, During, and After Pregnancy 2003



"Every year, nearly 1,000 of our sisters and daughters die and hundreds of thousands of others experience medical complications from pregnancy. Death and serious illness due to pregnancy and childbirth shouldn't be part of the picture in the United States."

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Safeguarding the Health of Mothers

Safe motherhood begins before conception with proper nutrition and a healthy lifestyle. It continues with appropriate prenatal care, the prevention of complications when possible, and the early and effective treatment of any complications that do occur. The ideal result is a labor at term without unnecessary interventions, the delivery of a healthy infant, and a healthy postpartum period in a positive environment that supports the physical and emotional needs of the woman, infant, and family.

No Decline in Deaths in 20 Years

In the United States, two to three women die of pregnancy complications each day. From 1900 to 1982, deaths from pregnancy complications in the United States declined dramatically. In 1982, however, deaths stopped declining, and there has been no further improvement. Yet studies indicate that as many as half of all deaths from pregnancy complications could be prevented if women had better access to health care, received better quality of care, and made changes in their health and lifestyle habits.

The leading causes of maternal deaths are hemorrhage, blood clot, high blood pressure, infection, stroke, amniotic fluid in the bloodstream, and heart muscle disease.

Large Racial, Ethnic, and Age Disparities

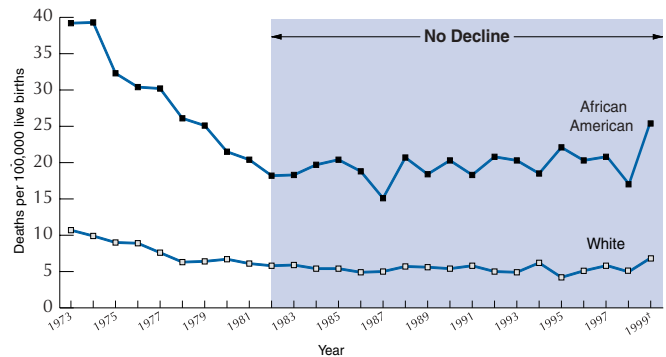
A woman's race, ethnicity, country of birth, and age are associated with her risk of dying of pregnancy complications. For example,

- The risk of death for African American women is almost four times that for white women.
- The risk of death for Asian and Pacific Islander women who immigrated to the United States is two times that for Asian and Pacific Islander women born in the United States.
- The risk of death for women 35–39 years old is nearly three times that for women 20–24 years old. It is even greater for women over 40.

Complications Are Costly

Complications *before* delivery account for more than 2 million hospital days of care and over \$1 billion each year in the United States. These figures would be higher if they took into account complications that occur *during* and *after* delivery.

African American and White Women Who Died of Pregnancy Complications,* United States



* Annual number of deaths during pregnancy or within 42 days after delivery, per 100,000 live births.

† The apparent increase in the number of maternal deaths between 1998 and 1999 is the result of changes in how maternal deaths are classified and coded. Source: CDC, National Center for Health Statistics.

Deaths Only Part of the Picture

Public health still has much to learn about the physical and mental effects of pregnancy complications and their short-term and long-term impact on the health of women, infants, and families. Given that 4 million women give birth each year in the United States, even small advances in research and prevention efforts can improve the quality of life for hundreds of thousands of women.

The most common pregnancy complications include

- Ectopic pregnancy.
- High blood pressure.
- Complicated delivery.
- Premature labor.
- Depression.
- Infection.
- Diabetes.
- Hemorrhage.

Other health risks—such as domestic violence, smoking, and alcohol abuse—can jeopardize the health of both mother and infant even though they have not traditionally been thought of as pregnancy complications. Because women seek health care during pregnancy, this time presents an important window of opportunity for safeguarding the health of mothers and reducing their health risks. By taking advantage of this opportunity, CDC and its partners can improve the well-being of women throughout their lives, not just during pregnancy, and ensure a healthier future for women and their families.

CDC's Leadership

One of CDC's most important leadership roles is in gathering accurate, useful data. CDC conducts research to improve both data collection methods and the accuracy of data. Good data provide the framework for effective action. Current activities include

- Establishing new and effective methods to monitor pregnancy complications.
- Evaluating the accuracy of existing data such as birth certificates and medical records.
- Monitoring emerging health topics such as the use of assisted reproductive technology.
- Identifying data sources needed to estimate the cost of pregnancy complications.

Pregnancy Mortality Surveillance System (PMSS)

Through the PMSS, CDC works with state health departments and other organizations to identify and gather information on pregnancy-related death. CDC uses PMSS data to examine

- Trends in pregnancy-related death.
- Risk factors for pregnancy-related death.
- Disparities related to race, ethnicity, and age.
- Specific conditions leading to death.

Conducting Innovative Research

Because safe motherhood begins long before conception and continues after birth, CDC conducts research spanning from fertility and contraception to birth and the time after delivery. Within this time frame, CDC studies pregnancy-related deaths and complications. These are some of the research questions being studied:

Pregnancy-Related Deaths

- Why are black women more likely than white women to die of pregnancy complications?
- Why are women aged 35 and older more likely than younger women to die of pregnancy complications?
- How common are pregnancy-related deaths caused by pulmonary embolism, stroke, or anesthesia?
- How do risk factors differ for women who die of serious conditions compared with those who survive?

In the past, pregnancy-related deaths were the central focus of CDC's maternal health research, but now the program is increasing efforts to learn more about the

The Safe Motherhood Program

The Safe Motherhood Program provides national leadership and coordinated action by bringing together states and many other partners devoted to safeguarding the health of mothers. The Safe Motherhood Program's mission is to promote the health of women before, during, and after pregnancy. CDC and its federal partners work with state and local health departments and other organizations to collect and analyze data on maternal health, conduct research, and translate the findings into high-quality, effective programs.

Pregnancy Risk Assessment Monitoring System (PRAMS)

CDC and states use PRAMS to collect data on women's behaviors and experiences before, during, and immediately after pregnancy. PRAMS is conducted in 31 states and New York City and covers 62% of all U.S. births. The data help to identify groups of women at high risk for health problems, monitor changes in health status, and measure progress in improving the health of mothers and infants (see map on page 4).

extent and severity of pregnancy complications. Although pregnancy-related deaths remain a priority for research, complications must also be addressed. CDC hopes to answer questions such as these:

Pregnancy Complications

- Can data from managed care organizations be used to identify pregnancy complications?
- How often do labor and delivery complications occur?
- How does infection affect pregnancy?
- How can health providers screen for domestic violence during pregnancy?

Next Steps

CDC and partners have identified many pregnancy complications that are not well understood—for example, postpartum depression and heart muscle disease. With its partners, CDC will work to fill these serious gaps in knowledge.

CDC's Partnerships to Promote Safe Motherhood

CDC supports the advancement of safe motherhood through partnerships. Working together and communicating experiences will lead to more productive and meaningful programs.

PRAMS and the States

States use PRAMS data to develop and evaluate policies and programs for women and children. In 2002, a booklet entitled *From Data To Action* was published describing examples of how PRAMS data are used at the state and local levels (www.cdc.gov/nccdphp/drh/srv_prams.htm).

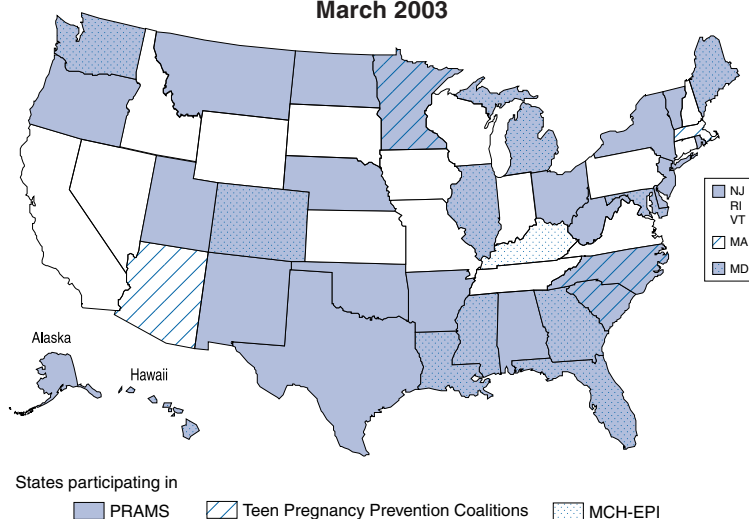
Working Closely With Communities

- Teenagers who are successful, hopeful about their futures, and supported by their communities are more likely to postpone pregnancy. The Community Coalition Partnership Program (CCPP) provides youth with leadership training, job skills, and job opportunities. Each community coalition is made up of local government, business, and community-based organizations.
- Recently, state coalitions were funded to support teen pregnancy prevention coalitions in Arizona, Massachusetts, Minnesota, North Carolina, and South Carolina.
- Community-based studies in Harlem, New York, Los Angeles, Atlanta, and Chicago have examined the role of social stress during pregnancy in black women's lives. For example, a book based on the Harlem study, *Stress and Resilience: The Social Context of Reproduction in Central Harlem*, documents the cultural, psychological, and behavioral influences that affect black women's health during pregnancy. These studies indicate a need for culturally sensitive and appropriate interventions targeting stress during pregnancy.

Maternal and Child Health Epidemiology Program (MCH-EPI)

Through MCH-EPI, state and local health departments strengthen their ability to collect, analyze, and use data to develop health policies and programs for women, children, and families. This Health Resources and Services Administration/CDC program provides epidemiologists to work in 12 states and the Indian Health Service. MCH-EPI also sponsors courses, conferences, and Internet activities for epidemiologists and other public health staff.

State-Based Efforts to Promote Safe Motherhood March 2003



Future Directions

Public health must invest in research that will enable the nation to develop policies and programs to prevent pregnancy complications and improve women's health. CDC will work with partners to conduct research, share the results, and take appropriate action. Government agencies, public and private organizations, health care providers, communities, and individuals have a responsibility to make safe motherhood a national priority. Together, CDC and its partners can ensure the health of women before, during, and after pregnancy.

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